

WHAT IS CLAIMED IS:

1. A method for converting an input image with a plurality of pixels to an output image using an N-dimensional conversion table with a plurality of nodes, the method comprising the steps of:  
5 storing odd-indexed nodes and even-indexed nodes on separate RAMS for each dimension of the conversion table; retrieving for each pixel a set of output color values corresponding to nodes adjacent to the pixel in the  
10 conversion table; and interpolating within each set of output color values to produce the output image.
2. The method according to Claim 1 wherein each pixel has N color components.
- 15 3. The method according to Claim 2 wherein each color component allocates bits for indexing into the conversion table.
4. The method according to Claim 2 wherein each color component allocates bits for interpolation.
- 20 5. The method according to Claim 1 wherein the set of output values are capable of being simultaneously accessed from the RAMS.

6. The method according to Claim 1 wherein the input image is in the RGB color space.
7. The method according to Claim 1 wherein the output image is in the CMYK color space.
- 5 8. An apparatus for converting an input image with a plurality of pixels to an output image using an N-dimensional conversion table with a plurality of nodes, the apparatus comprising:
  - a set of RAMS for storing odd-indexed nodes and even-indexed nodes for each dimension of the conversion table;
  - 10 means for retrieving for each pixel a set of output color values corresponding to nodes adjacent to the pixel in the conversion table; and
  - means for interpolating within each set of output color values to produce the output image.
- 15 9. The apparatus according to Claim 8 wherein each pixel has N color components.
10. The apparatus according to Claim 9 wherein each color component allocates bits for indexing into the conversion table.
- 20 11. The apparatus according to Claim 9 wherein each color component allocates bits for interpolation.

12. The apparatus according to Claim 8 wherein the set of output values are capable of being simultaneously accessed from the set of RAMS.
13. The apparatus according to Claim 8 wherein the input  
5 image is in the RGB color space.
14. The apparatus according to Claim 8 wherein the output image is in the CMYK color space.